

## **SUSTAINABLE DEVELOPMENT CHALLENGE GRANT RECIPIENT FOR 1997: ACID MINE DRAINAGE AND ART**

**Grant Recipient:** The Heritage Institute - Allegheny Heritage Development Corp. (AHDC)

**Grant Title:** Acid Mine Drainage and Art (AMD&ART)

**EPA Project Manager:** Bernie Sarnoski - [sarnoski.bernie@epa.gov](mailto:sarnoski.bernie@epa.gov)

**Organization Contact:** Ellen P. Micoli and Jessica Johnson, Co-coordinators

The Bottle Works

411 Third Avenue

Johnstown, PA 15906.

Ph: 814-539-5357

Fax: 814-539-4345

Email: [amdart@gte](mailto:amdart@gte)

<http://www.allegheny.org/>

**Project Period:** 8/31/98 - 7/31/01

**Affected Areas:** Johnstown Metropolitan Area

### **INTRODUCTION AND PROJECT RATIONALE**

Acid mine drainage (AMD) has contaminated 7,500 miles of stream throughout the Appalachian coal producing regions. This pollution has seriously degraded habitat and economic activities within the area. The AHDC seeks to restore the health of several waterways within the Johnstown Metropolitan Area by means of a three-site national demonstration project. This proposal merges treatment with art to create attractive treatment systems to restore the environment and the economic use of these waterways (through ecotourism) in a way which captures the eye and the imagination. Expected results are the improved water quality and the reintroduction of wildlife and fish species to their restored ecosystems; an estimated \$1 million increase in annual income for new business opportunities; and the empowerment of local communities to address AMD issues.

### **SCOPE OF WORK**

The Allegheny Heritage Development Corp identified a number of ecological and economic results it expects to achieve using funds obtained through the EPA Sustainable Development Challenge Grant Program for its three-site area. The three sites selected for this pilot project were:

- i Vintondale - a borough on the outskirts of Johnstown with “a single, manageable discharge, a single community, & a highly visible treatment area bordered by a heavily traveled rail-trail”;
- i Hughes Bore Hole - which discharges 2,000 gallons per minute of AMD and is located several feet away from the Little Conemaugh River; &
- i Dark Shade Creek, which “encompasses an entire river sub-basin containing” over a dozen separate discharges.

Money obtained from the EPA SDCG, matching funds, and non-matching federal funds have been allocated to and will be measured by the AHDC’s ability to produce the following results:

### **ENVIRONMENTAL GOALS**

- 1) Conversion of dead, mineral-laden waters entering the treatment system into waterways which meets specific, legal definitions of being clean through:

- Installment of natural aerators, settling ponds, limestone channels, and constructed wetlands for passive treatment of AMD at each site
  - Increase in pH levels from the initial 2.4 to 2.9 readings to between 6 and 7 pH
  - Reduction of metal loads until only trace amounts of iron, aluminum, manganese, and sulfur are present
- 2) Restoration of oxygen levels necessary to support an aquatic ecosystem (via aeration techniques)
  - 3) Remediation of the nine discharges of Dark Shades Creek to allow for fish and other wildlife to reclaim the area for the first time in 70 years
  - 4) Restoration of eleven miles of Shade Creek and twelve miles of Stonycreek (to Johnstown) to allow for the presence of fish
  - 5) Remediation of Hughes Bore Hole, removing 8,300 lbs of pollution load per day
  - 6) Construction of wetlands habitat to provide habitat for approx. 40 bird species, including wood ducks, mallards, and Canadian geese

### **ECONOMIC GOALS**

- 1) Remediation of the Hughes Bore Hole to allow for the reopening of 3 miles of the Little Conemaugh for fishing
- 2) Remediation of Dark Shades Creek to create growth potential for fishing and whitewater industries on the Stonycreek River, currently estimated to be worth \$1 million per year in lost revenues
- 3) Formation of a regional network of greenways and rail-trails in Southwestern Pennsylvania which will incorporate the parks as points of interest
- 4) Reduction of water costs for the Johnstown Metropolitan Area through passive AMD treatment
- 5) Contribution of sufficient acreage into a wetlands mitigation banking program to finance landscape maintenance in perpetuity
- 6) Provision of landscape art installations of national significance to attract visitors

### **MODEL TRANSFERABILITY**

- 1) Careful documentation to allow for duplication/ adoption of the community-driven AMD&ART approach by other regions

Overall, the AMD&ART project strives to significantly reduce the impact of acid mine drainage on the Stonycreek and Little Conemaugh Rivers, thus restoring much of Johnstown's river ecosystem as well as a big portion of the Kiski-Conemaugh River Basin. Within three years, the AMD&ART project envisions the financially self-sustained treatment of water at each site, where wetlands mitigation banking will fund treatment costs, while communities will maintain the recreational facilities at the parks. Within ten years, it visualizes healthy fishing and rafting/kayaking industries contributing several million dollars per year to the JMA economy. And by twenty years, it hopes to have all three sites linked by greenways and visited by tens of thousands of people every year.